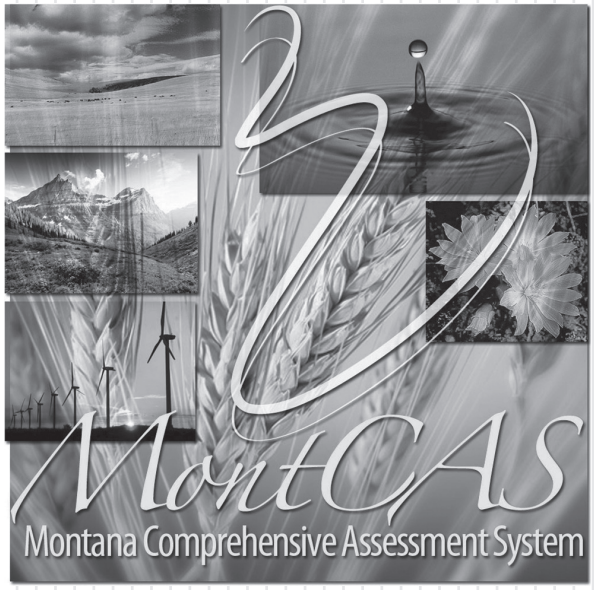
Montana Comprehensive Assessment System (MontCAS CRT)

Grade 10
Common Released Items
Spring 2011



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Montana
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Reading Directions

This Reading test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

This test includes two types of questions: multiple-choice and constructed-response questions.

For the multiple-choice questions, you will be given four answer choices—A, B, C, and D. You are to choose the correct answer from the four choices. Each question has only one answer. After you have chosen the correct answer to a question, find the question number in your Answer Booklet and completely fill in the circle for the answer you chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The example below shows how to completely fill in the circle.

CORRECT MARK	INCORRECT MARKS
●	❍ ⊙ ◉ ⊘

If you decide to change your answer to a question, erase the wrong mark completely before filling in the circle of the new answer. Be sure you have only one answer marked for each question. **If two circles are bubbled in for the same question, that question will be scored as incorrect.**

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You may make notes or use highlighters in your Test Booklet, but you must bubble or write your final answers in your Answer Booklet. **Do not make any stray or unnecessary marks in your Answer Booklet.**

Let's work through a sample question together to be sure you understand the directions.

Sample Question

1. What is the capital of Montana?
   - A. Browning
   - B. Glendive
   - C. Helena
   - D. Missoula

Reading

Read this passage about Braille and then answer the questions that follow.

Braille, 1824; France

Charles Panati

Braille, the universally used system of writing and reading by the blind, is based on a code of sixty-three characters, each made up of one to six raised dots arranged in a six-position matrix. It was invented in 1824 by a fifteen-year-old French boy, Louis Braille, who had been blind himself since the age of three.

Various special alphabets had been devised for the blind prior to Braille's invention. They included letters engraved in wood, cast in lead, and cut in cardboard. Most were awkward and difficult to learn. One of the few that had any real effectiveness was a system by another Frenchman, Valentin Haüy (1745–1822), who was the first to emboss paper to help the blind
2 read. Haüy's letters in relief were actually a punched alphabet, and imitators immediately began to copy and improve on his system. Composed entirely of letters, it could be mastered quickly by a person already familiar with the alphabet, and consequently one early system, called Moon Type, invented by William Moon in 1845 in Brighton, England, is still used in Great Britain for people who lose their sight late in life.

Young Louis Braille dedicated himself to developing a practical alphabet for the blind shortly after he had started school for the blind in Paris and found that the library had only fourteen books in embossed characters. The few students who did check out the books continually
3 complained of the cumbersome alphabet they contained and soon gave up reading, in frustration and disgust. An even more glaring weakness of that embossed letter was that students were unable to write in it.

To solve the problems, Braille began experimenting with a communication method called night-writing, which the French army used for nighttime battlefield missives. With assistance from an army officer, Captain Charles Barbier, Braille pared the method's twelve-dot configurations to six and published his results in 1829.

Although Braille's classmates quickly gravitated to his system, it was not widely accepted for several years; even Braille's own Paris school did not adopt the system until 1854, two years after his death.

In the United States, the Braille method underwent modifications during the 1870s by a blind Boston teacher, Joel W. Smith, who changed its name to American Braille. Though other methods of enabling the blind to read were attempted, particularly the so-called New York Point System, developed in the 1860s by William B. Wait, Braille won out. In 1916, the United States sanctioned Louis Braille's original system of raised dots, and in 1932 representatives from agencies for the blind in England and the United States met in London and arrived at a modification they called Standard English Braille, Grade 2, which soon was adopted throughout the English-speaking world.

1. What important information is revealed in the first sentence of the passage?

   A. Since it was invented, Braille has been used by all people who are blind.
   B. Braille's invention required the use of unusual technologies.
   C. Today Braille is used universally by people who are blind.
   D. Braille is based on a code that only people who are blind can comprehend.

2. Before Braille was invented, what was the **main** problem with alphabets used by people who were blind?

   A. They were too expensive.
   B. They were not easy to use.
   C. They lacked certain letters.
   D. They used embossed letters.

3. According to paragraph 2, Valentin Haüy's alphabet was copied and improved because

   A. it could easily be learned.
   B. he shared his ideas with others.
   C. the cost of embossing was minimal.
   D. his use of a matrix was something new.

4. In paragraph 3, what does the word <u>cumbersome</u> mean?

   A. embossed
   B. inconvenient
   C. innovative
   D. written

5. According to the passage, which statement about Louis Braille's invention is true?

   A. It can include either a six- or twelve-dot matrix.
   B. It is frequently used by armies during night fighting.
   C. It was not known about by Parisian school officials.
   D. It was not immediately popular when it was first invented.

6. How is the information in this passage organized?

   A. from most to least useful
   B. in order of importance
   C. according to country of origin
   D. in chronological order of development

7. What is the **most likely** reason the author wrote this passage?

   A. to suggest that the Braille system is an effortless invention
   B. to promote Louis Braille's work on behalf of people who are blind
   C. to give some history about reading systems for people who are blind
   D. to suggest some different methods people who are blind may use to read

Read the poems about skating, and then answer questions that follow.

Skating

Spring is past, and Summer's past,
    Autumn's come, and going;
Weather seems as though at last
    We might get some snowing.
Spring was good, and Summer better,
    But the best of all is waiting,—
Madame Winter—don't forget her.—
    O
        You
            Skating!

Spring we welcomed when we met,
    Summer was a blessing;
Autumn points to school, but yet
    Let's be acquiescing.[1]
Spring had many precious pleasures;
    Winter's on a different rating;
She has greater, richer treasures,—
    O
        You
            Skating!

Gleam of ice, and glint of steel,
    Jolly, snappy weather;
Glide on ice and joy of zeal,
    All, alone, together.
Fickle Spring! Who can imprint her?—
    Faithless while she's captivating;[2]
Here's to trusty Madame Winter.—
    O
        You
            Skating!

—e.e. cummings

[1] acquiescing: accepting
[2] captivating: charming

Skater

She was all in black but for a yellow pony tail
that trailed from her cap, and bright blue gloves
that she held out wide, the feathery fingers spread,
as surely she stepped, click-clack, onto the frozen
top of the world. And there, with a clatter of blades,
she began to braid a loose path that broadened
into a meadow of curls. Across the ice she swooped
and then turned back and, halfway, bent her legs
and leapt into the air the way a crane[1] leaps, blue gloves
lifting her lightly, and turned a snappy half-turn
there in the wind before coming down, arms wide,
skating backward right out of that moment, smiling back
at the woman she'd been just an instant before.

—Ted Kooser

[1] crane: a type of bird

8. Which line from "Skating" **best** creates an uplifting tone?

   A. "Spring is past, and Summer's past," (line 1)
   B. "Autumn points to school, but yet" (line 13)
   C. "Jolly, snappy weather;" (line 22)
   D. "Faithless while she's captivating;" (line 26)

9. The poet of "Skating" **most likely** repeats the lines "O / You / Skating!" because he wants to show that the speaker is

   A. focusing on the end of winter.
   B. delighting in the vision he sees.
   C. addressing three different people.
   D. comparing winter to spring.

10. Which sentence **best** explains why the speaker describes the skater's fingers as "feathery" in line 3 of "Skater"?

    A. She is gradually being compared to a bird.
    B. She moves so fast her hands are a blur.
    C. She is so small she weighs very little.
    D. She seems to float like a cloud.

11. What does the word <u>snappy</u> mean as it is used in line 10 of "Skater"?

    A. careful
    B. lively
    C. necessary
    D. weak

12. In lines 12 and 13 of "Skater," what does the phrase "smiling back / at the woman she'd been just an instant before" **most** suggest?

    A. The woman is aware of growing older.
    B. The woman is pleased with herself.
    C. The woman is constantly moving.
    D. The woman is laughing at herself.

13. The poets wrote these poems **most likely** to

    A. share an affection for skating.
    B. entertain with stories about skating.
    C. persuade readers to try recreational skating.
    D. inform readers about the techniques of skating.

14. What would be the **best** way to find more poems by e. e. cummings or Ted Kooser?

    A. look through the index of *Favorite American Poems*
    B. search the culture section of a newspaper
    C. look through recent issues of *Poets* magazine
    D. search by author in a library database

Read this passage about contestant number four, Porter Osborne, a high school student competing in a speech contest in Georgia, and then answer the questions that follow.

Excerpt from *Run with the Horsemen*

Ferrol Sams

1 He tried to remember everything Mrs. Parker had told him about stage appearance. For one insane moment he had an urge to suck his finger, but he folded his hands quietly in his lap. Thank God for the footlights, he thought. There must be ten thousand people in that auditorium, but they're just shadows beyond those bright lights. He was glad his mother had made him urinate a half hour earlier. He resisted the urge to cross his legs. Are the judges already looking? he wondered. Don't do anything to call attention to yourself, he cautioned. The first speaker had risen. Keep your eyes on him and listen to him; don't cross your legs; sit erect, he warned himself.

2 "Fourscore and seven years ago," the first speaker intoned, "our forefathers brought forth on *this* continent. . . ."

3 For Pete's sake! the boy thought, who picked that speech for him? Nobody in Georgia likes Lincoln, and, besides, why did he emphasize the word *this*? Mrs. Parker would have his hide.

The second boy stuttered twice in his delivery. The third boy used two periods where obvious commas were intended, and a very faint question mark instead of a period. As number four was called, followed by his name and hometown, a sudden surge of confidence unexpectedly carried him calmly to the front of the stage.

"Mr. President," he began in measured, reasoned tones.

6 Minutes later, with <u>impassioned</u> patriotism, he thundered, "Give me liberty, or give me death!"

As he walked back to his seat, it seemed to him that the applause was the longest and loudest of the evening so far.

He remembered to sit up straight as he looked at the faces of the following contestants, although he was too absorbed in the backwash of relief to hear a word they said. He noted, however, that the applause they received was scattered and brief. As number seven rose to speak, the boy's eyes drifted beyond him to number eight. This was a boy he had met that afternoon, a member of the debate team from Carrollton.

He was a senior named Tom Henderson, a self-assured, confident, polite, and cordial young man with a handsome face and beautiful voice and manners. As he introduced himself to everyone, he had seemed so suave that the boy felt ten years old again and wondered if his ears were clean. The boy assumed that he must be a real genius if he was representing Carrollton in two district events, and after he watched his easy assurance and listened to his well-modulated conversation, he realized that this guy was a preconfirmed winner in declamation. Tom was so likeable that the boy was not even jealous, only resigned.

10 As he looked at him now, he saw that Tom sat with his legs crossed and was tilted ever so slightly backward in his chair. His thumbs were hooked in the armholes of his vest, his head was bowed, and his eyes were closed. His lips were noticeably moving. As the boy jerked his eyes away to gaze raptly at the face of speaker number seven, he thought with consternation, Oh, Lord, he's going over his speech, and he's not remembering where he is. It never occurred to him that this splendid sophisticate might not have had the blessing of advice from some Carroll County Mrs. Parker.

11 The moderator announced, "Number eight, Tom Henderson, Carrollton, Georgia, representing Carroll County High School." Tom rose from his chair, walked to the front center of the stage, looked in confidence across the footlights, and stood silent as the grave. The entire audience grew still. After an unbearable interval of startled silence, a feminine voice from the audience, obviously reading, delivered the first line of his speech. Tom folded his hands behind his back, rose briefly on tiptoe, cleared his throat, swallowed hard, settled back

to a flatfooted stance, and repeated the sentence woodenly. He stopped. The silence came again. Silence from that many people became more than a lack of noise. It was a listening, attentive force that throbbed and waited and impelled and pushed.

Just as it had lasted to the point the boy felt that he must scream to destroy it, Tom raised his shoulders in a resigned shrug, mumbled, "I'm sorry. It's no use," and shuffled back to his seat.

It took the stunned moderator a painful moment to recover his composure and announce, "Number nine, William Westmoreland, Route One, Griffin, Georgia, representing Spalding County High School."

The boy fastened his gaze on number nine's face while his brain whirled. I can't believe Tom forgot that speech. How in the world did he manage to do that?

15 He succumbed to the comfort of comparison. Boy, I'm glad I didn't do that. I didn't forget a word in my speech. I didn't stumble the first time. Of course the credit for that goes to Mrs. Parker, but still I didn't forget my speech. Poor Tom. Underneath he must be just as scared as anybody. This really isn't fair. If he hadn't forgotten, he would have been sure to win. He can't help it because he forgot. It really isn't fair.

As speaker number nine walked to his seat, the boy rose from his chair. Propelled by a force he did not understand, he found himself unbelievably tipping* across the stage, only dimly aware that the eyes of everyone must be on him, oblivious of everything except the compulsion of what he had to do. He gripped the edge of the moderator's table, leaned over, looked that startled man in the eyes, and with quivering chin and quavering voice, launched his plea: "Please, sir, can you give the boy from Carrollton another chance? Anybody can forget."

As he made his way back to his seat, he heard as if in a trance the moderator intone, "Number ten, final speaker in this contest. Charles Willingham, LaGrange, Georgia, representing Troup County High School."

18 He forgot about stage presence and appearance. He sat with hanging head and hot cheeks while number ten manfully spoke. He had doubled his embarrassment about Tom by becoming personally embarrassed himself. What could I have been thinking? The rules plainly state the disqualifying conditions. A speaker is allowed only one cue. Now I've killed any chance I might have had. That moderator thinks I'm a fool. Now I'll be disqualified. I couldn't help it because Henderson forgot his speech. Why did I feel called on to make a spectacle of myself? None of the other boys let it bother them. Oh, call Dr. Redwine for the whole bunch, he thought.

As speaker number ten bowed to polite applause and resumed his seat, the moderator rose and announced in formal tones, "There has been a request that contestant number eight be granted another opportunity. Although the rules are clear on this point, I have consulted the other officials and we have decided to grant this request, which, I might add, is the most unusual I have ever received in my twenty years of teaching. Ladies and gentlemen, I again give you contestant number eight, from Carrollton, Georgia."

As Tom Henderson got up, the applause leaped across the footlights like something alive.

Well, thought the boy, regardless of what the judges are thinking, at least the crowd approves. Everybody likes that Henderson boy.

That Henderson boy was standing, easy and relaxed, at the edge of the stage, holding up his hand for quiet. He spoke in an assured and confident tone. "Ladies and gentlemen, I appreciate this more than you can know. The officials are most kind, and my young friend from Brewton thoughtful and unselfish, but I must decline this second chance. I do not think it would be fair, and to be perfectly honest, I'm not at all sure I would remember my speech this time. I apologize to you and I apologize to my school for letting them down. Thank you, but no, thank you."

He smiled warmly, bowed, and sat down.

Ashamed of the relief that filled him, the boy applauded with the rest.

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* tipping: tiptoeing

15. In paragraphs 2 and 3, which mistake does the first speaker make?

A. He does not appeal to the audience.
B. He does not follow instructions.
C. He talks in outdated language.
D. He forgets his lines.

16. In paragraph 6, what does the word <u>impassioned</u> mean?

A. characterized by laughter
B. consumed with fear
C. filled with feeling
D. marked by sarcasm

17. According to Porter Osborne, which reason **best** explains Tom Henderson's behavior in paragraph 10?

A. He does not respect the seriousness of the event.
B. He does not realize that his turn is coming up.
C. He has not had enough sleep the night before.
D. He has not had the benefit of a trainer.

18. Which word **best** describes the mood of paragraph 11?

A. agitated
B. reverent
C. suspenseful
D. wistful

19. Based on paragraphs 1, 3, 10, and 15, who is Mrs. Parker?

A. She is a contestant judge.
B. She is Porter Osborne's advisor.
C. She is the moderator of the event.
D. She is Tom Henderson's principal.

20. Which quotation from paragraph 18 is a statement of fact?

A. "A speaker is allowed only one cue."
B. "That moderator thinks I'm a fool."
C. "Now I'll be disqualified."
D. "None of the other boys let it bother them."

21. The narrator's **most likely** purpose for including Porter Osborne's thoughts in paragraph 18 was to

A. convey that Porter Osborne regretted competing.
B. reveal that Porter Osborne's actions were spontaneous.
C. show that Porter Osborne's goal was to look good.
D. share that Porter Osborne had moments of anger.

22. The experiences the judges had with former contestants **most likely** caused them to think

A. their rules needed updating.
B. competitiveness was decreasing.
C. Porter Osborne was afraid to win.
D. Porter Osborne was unusually kind.

23. What lesson should Tom Henderson take away from this experience?

A. Speaking well builds character.
B. Thinking like a winner is essential.
C. Preparation is the key to success.
D. Competition causes people to act selfishly.

24. Which character from folklore **most closely** resembles Porter Osborne during the competition?

A. the boy Jack, who sold a cow for some magic beans, planted them, and had adventures at the top of the huge beanstalk
B. the little pig, who built his house of bricks and was safe from the wolf
C. the mouse, who overcame his fear, pulled a thorn from the foot of a lion, and was later spared by that same lion
D. Robin Hood, who loses an initial battle with Little John at a stream crossing, only to become his leader

25. Which statement **most closely** describes the purpose of the passage?

A. to present a detailed view of public speaking
B. to persuade readers to take up public speaking
C. to entertain with a dramatic public speaking event
D. to explain the elements of a successful public speaking event

26. This passage would be **most** helpful to a student working to strengthen

A. academic skills.
B. self-confidence.
C. self-control.
D. social skills.

27. Explain how Porter Osborne's character traits motivate his actions. Use details and information from the passage to support your answer.

Scoring Guide

Score	Description
4	Response provides a thorough explanation of how Porter Osborne's character traits motivate his actions. Explanation includes specific, relevant information from the passage.
3	Response provides an explanation of how Porter Osborne's character traits motivate his actions. Explanation includes supporting information from the passage but lacks specificity, relevance, and/or development.
2	Response provides a partial explanation of how Porter Osborne's character traits motivate his actions. Explanation includes limited information from the passage and/or is partially correct.
1	Response makes a vague or minimal explanation of how Porter Osborne's character traits motivate his actions.
0	Response is totally incorrect or irrelevant.
Blank	No response.

Scoring Notes

An explanation of how Porter Osborne's character traits motivate his actions may include, but need not be limited to, that he is:

- detail-oriented: he remembers most of Mrs. Parker's suggestions,
- attentive: he listens and analyzes his opponents with great care,
- self-disciplined: he performs his speech well and follows through on how he should behave afterwards,
- appreciative: he admires the good qualities of his competitor, Tom Henderson,
- humble: he resigns himself to losing to the better man, he does not wish to win above all else,
- empathetic: he puts himself in Tom's place and feels for him having forgotten his speech,
- kind and brave: he appeals to the judges on Tom's behalf despite knowing the rules against it and that it could threaten his own win,
- self-doubting: he does not have confidence that he has done the right thing, and
- moral and self-aware: he knows that he is no longer feeling truly magnanimous when he is relieved at not having to compete against Tom after all.

Other relevant details from the passage may also be cited.

Example of Score Point 4

Porter Osbornes character traits greatly motivated his actions. While I was reading I found his character to be confident, but sympathetic as well. I deduced this by the way he was described as giving his speech and by his compassion for Tom when he thinks, "poor Tom" in paragraph 15. Instead of relishing in Tom's defeat he uses his traits of confidence and compassion to boldly go to the judges and plea to give Tom another chance. These character traits were hopeful to see in a mostly selfish world and I wish more people could be like Porter.

Example of Score Point 3

Porter Osborne may not be the most confident or talented speaker in the competition, but he knows the importance of sportsmanship and doing the right thing. Osborne understands that sometimes winning a competition is not the most crucial element in competing. Rather, he realizes that standing up for others can be more beneficial when the competition ends. Porter's traits make him a relatable and honest character who has excellent judgement skills and problem solving skills. In the end, Porter's attempts to help a friend may have been wasted, but the reader can tell Porter feels happy with his decision in the end.

Example of Score Point 2

Porter Osborne cares about the people in his competition and he doesn't think its fair because Tom couldn't remember his speach. If Porter couldn't remember his speach he would want someone to stick up for him and give him a second chance.

Example of Score Point 1

Porter is a nice guy and these characteristics motivate him because he is sympathetic and wants to be fair.

Example of Score Point 0

He feels that he shouldn't not get a second chance because it's a rule for one and it would be unfair to other competeters.

Mathematics Directions

This Mathematics test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

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Let's work through a sample question together to be sure you understand the directions.

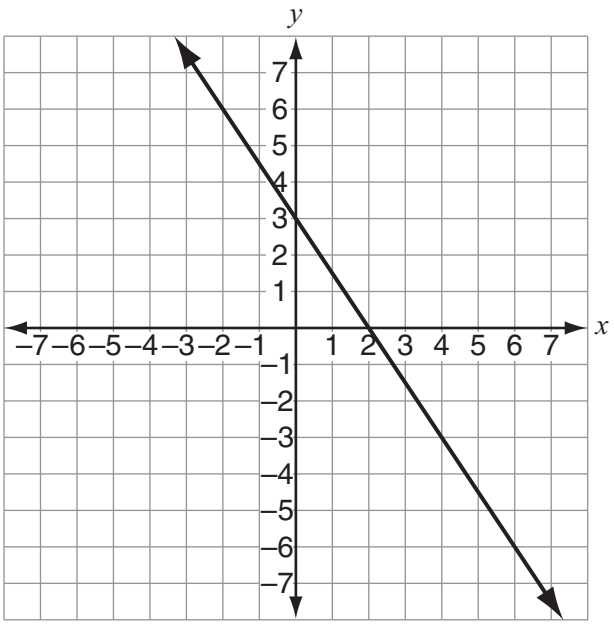
Sample Question

1. Montana is the **fourth** largest state. How many states are larger than Montana?

   A. 1
   B. 3
   C. 10
   D. 42

Mathematics (No Calculator)

1. Study the line on the graph below.



Which equation represents this line?

A. $y = -\frac{3}{2}x + 3$

B. $y = -\frac{3}{2}x + 2$

C. $y = -\frac{2}{3}x + 3$

D. $y = -\frac{2}{3}x + 2$

2. Point J is the midpoint of $\overline{MN}$. The coordinates of point M are (–3, 4). The coordinates of midpoint J are (1, –1). What are the coordinates of point N?

A. (–1, 1.5)

B. (5, –6)

C. (5.5, –5)

D. (7, –8)

3. A manufacturing company determined that a video game system has a defective rate of 16.4%. Based on the data, how many video game systems out of 100,000 will be defective?

A. 1,640

B. 16,400

C. 164,000

D. 1,640,000

4. The formula below shows the relationship between the surface area, y, of a cube and the length, x, of each edge of the cube.

$$y = 6x^2$$

The edges of a blue cube are 3 times the length of the edges of a yellow cube. What is the ratio of the surface area of the blue cube to the surface area of the yellow cube?

A. 3:1
B. 6:1
C. 9:1
D. 18:1

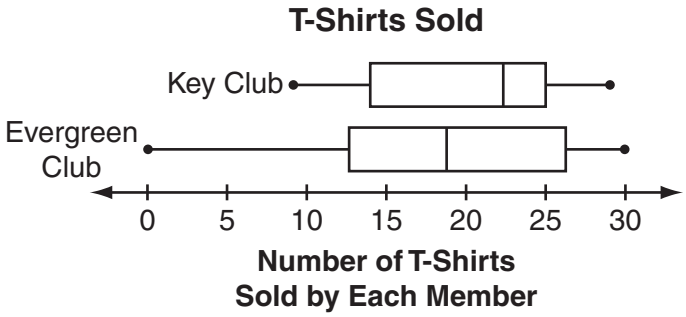
5. A restaurant manager estimates the cost, C, of a dinner party using the formula $C = 120 + 12x$, where x represents the number of people at the party. What is the cost of a party with 15 people?

A. $ 11
B. $ 132
C. $ 300
D. $1980

6. The variable n represents the smallest whole number that is divisible by 3 and 7. Which is the **smallest** prime number greater than n?

A. 11
B. 21
C. 23
D. 43

7. The box-and-whisker plot below shows the distribution of T-shirts sold by each member of two clubs.



According to this plot, which statement **must** be true?

A. Members of the Key Club sold more T-shirts.
B. More members belong to the Evergreen Club.
C. Members of the Key Club had a greater median number of T-shirts sold.
D. More members of the Key Club sold 20 T-shirts than members of the Evergreen Club.

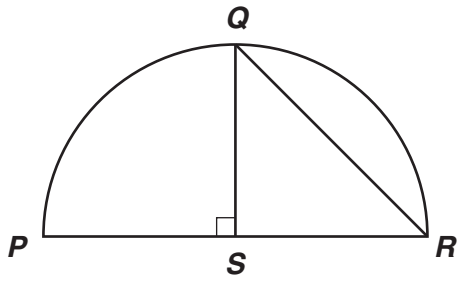
8. Solve the system of equations below for x and y. Write your answer as an ordered pair (x, y).

$$4x - y = 13$$
$$7x + 3y = -1$$

9. Evaluate:

$$\frac{6+3}{2} - \frac{1-3}{4}$$

10. Arc PQR is a semicircle with $\overline{PS} \cong \overline{SR}$.



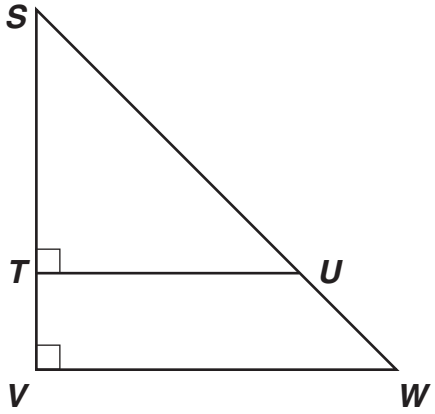
What is the measure of angle SRQ?

A. 90°
B. 60°
C. 45°
D. 30°

11. A student council's goal is to make a profit of at least $800 at the next dance. The cost of a disc jockey is $250. The price of a ticket to the dance is $3. Which inequality can be used to find s, the minimum number of tickets that can be sold for the student council to reach its goal?

A. $3s + 250 \geq 800$
B. $3s + 250 \leq 800$
C. $3s - 250 \geq 800$
D. $3s - 250 \leq 800$

12. Study the triangles below.



Which statement must be true?

A. $\frac{ST}{TU} = \frac{TV}{VW}$

B. $\frac{ST}{SU} = \frac{TV}{UW}$

C. $\frac{ST}{SV} = \frac{SU}{UW}$

D. $\frac{ST}{TU} = \frac{SV}{VW}$

13. Collin wants to estimate the number of hours that students in his high school study each week. Which sample would be **best** for Collin to use to collect his data?

A. students in his math class
B. students in afterschool sports
C. students in the library after school
D. students in the cafeteria during lunch

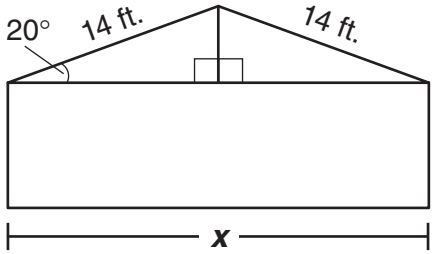
14. Gabriella walked 50 meters south. She then walked 130 meters east. Which measure is closest to the distance Gabriella is from where she started walking?

A. 120 meters
B. 139 meters
C. 180 meters
D. 189 meters

15. The radius of circle G is $\frac{1}{3}$ the radius of circle H. What fraction of the area of circle H is the area of circle G?

A. $\frac{1}{81}$
B. $\frac{1}{9}$
C. $\frac{1}{6}$
D. $\frac{1}{3}$

16. The roof of a house has a slope of 20° and measures 14 feet on each side, as shown below.



Which expression can be used to find the width, x, of the house?

A. 14(cos 20°)
B. 20(cos 14°)
C. $2 \cdot 14(\cos 20°)$
D. $2 \cdot 20(\cos 14°)$

17. Darlene took a representative sample of beads out of a large bag containing white, blue, green, and red beads. The table below shows the number of beads of each color in the sample.

Sample of Beads

Color	Frequency
White	10
Blue	9
Green	6
Red	15

If Darlene takes one more bead out of the bag, what is the expected probability that the bead will be either white or red?

A. $\frac{2}{3}$

B. $\frac{5}{8}$

C. $\frac{1}{2}$

D. $\frac{3}{32}$

18. Study the equation below.

$$\frac{5x}{3} - 3 = \frac{x}{6}$$

Which equation has the same solution for x?

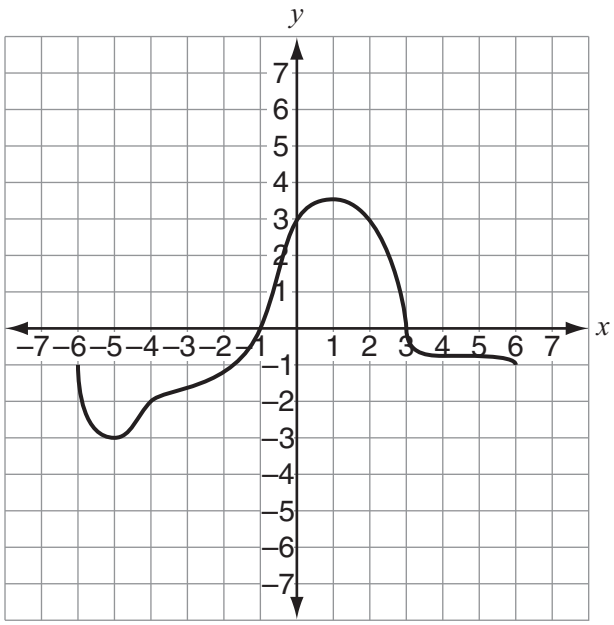
A. $5x - 9 = x$

B. $5x - 9 = 2x$

C. $30x - 18 = x$

D. $10x - 18 = x$

19. A function is graphed on the coordinate grid below.



Between which two values of x does the function decrease at the greatest rate?

A. –6 and –5

B. –1 and 0

C. 2 and 3

D. 3 and 6

20. Eric dilated triangle PQR to form its image, triangle $P'Q'R'$. Which statement **must** be true about these two triangles?

A. They are similar.

B. They are congruent.

C. They are equilateral.

D. They are symmetrical.

21. The edge of Niagara Falls has moved back 7 miles in the past 12,500 years as a result of erosion. At this rate of erosion, how many feet, to the nearest foot, does the edge of the falls move back each year?

A. 1,786 feet
B. 149 feet
C. 17 feet
D. 3 feet

22. A building manager has 6 offices for rent. The area of each office, in square feet, is listed in the table below.

Offices for Rent

Office	Area (square feet)
A	3,000
B	2,500
C	1,500
D	3,000
E	12,000
F	2,000

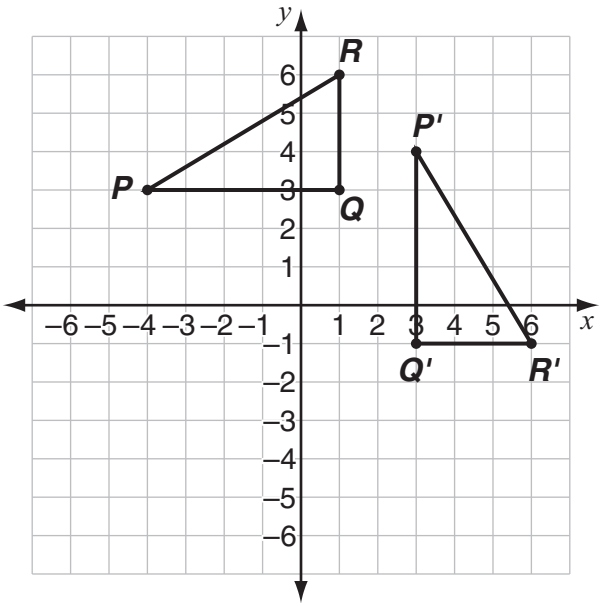
The manager calculates the mean of the areas of these offices. Then the manager removes the outlier from this data and recalculates the mean. By how many square feet is the mean decreased when the outlier is removed?

A. less than 2,000 square feet
B. between 2,000 and 4,000 square feet
C. between 4,000 and 6,000 square feet
D. more than 6,000 square feet

23. At Green High School, 6 students tried out for 2 openings on a mathematics team. In how many ways can 2 of these 6 students be chosen for the mathematics team?

A. 12
B. 15
C. 30
D. 36

24. Study the triangles below.



After which transformation is $\Delta P'Q'R'$ the image of ΔPQR?

A. reflection over x-axis
B. reflection over line $y = x$
C. 90° clockwise rotation about origin
D. 90° counterclockwise rotation about origin

25. Marco is pumping water from a pool. The equation below represents the relationship between the amount of water in the pool and the time since Marco started pumping.

$y = 600 - 3x$
x represents the number of minutes since Marco started pumping
y represents the number of gallons of water in the pool

What does the x-intercept of this equation represent?

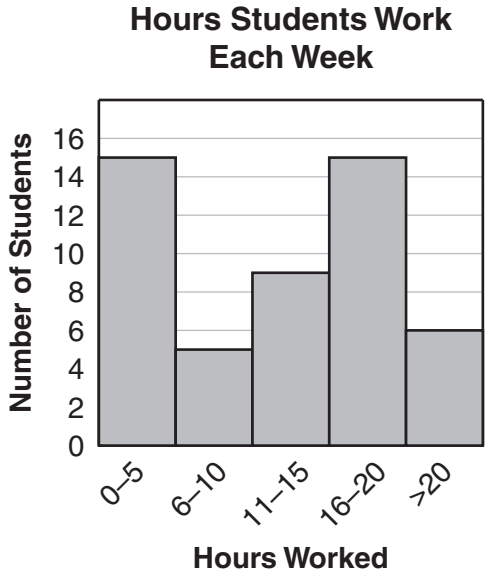
A. the rate at which the water is drained from the pool

B. the amount of water in the pool before it is drained

C. the maximum amount of water the pool can hold

D. the time it takes the water in the pool to drain completely

26. Tricia chose 50 students at random from her high school. She asked the students how many hours a week they work. Her results are shown in the histogram below.



A total of 823 students are in Tricia's high school. Based on the results of Tricia's survey, about how many students would be predicted to work 10 hours or less each week?

A. 400

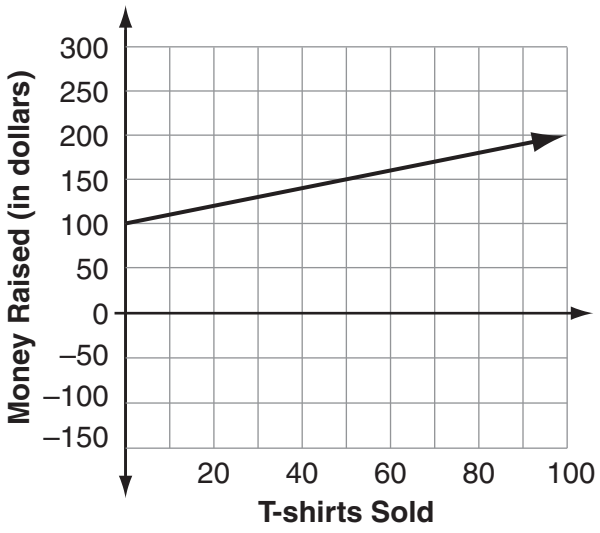
B. 325

C. 250

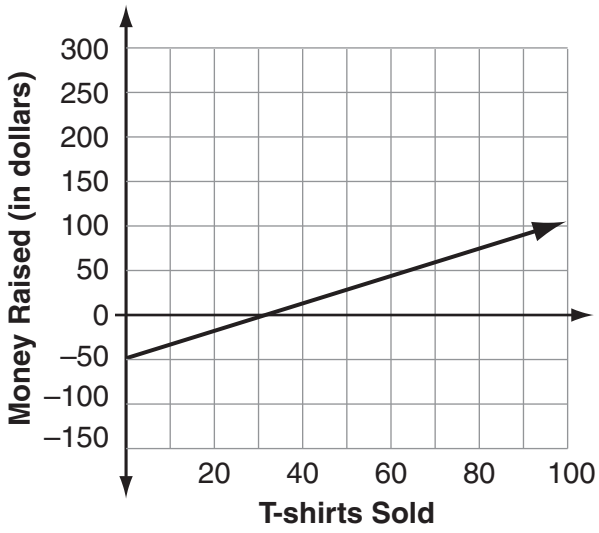
D. 100

27. A student council is selling T-shirts as a fund-raiser. After paying a one-time design fee of $100, the student council earns $5 per T-shirt sold. Which graph shows the relationship between the amount of money raised and the number of T-shirts sold?

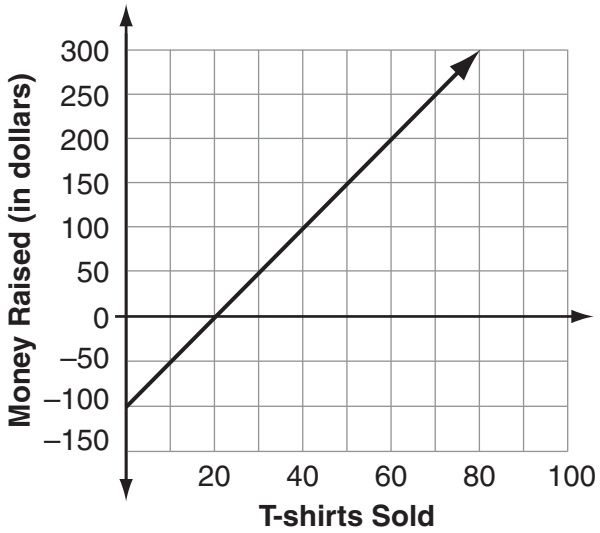
A.



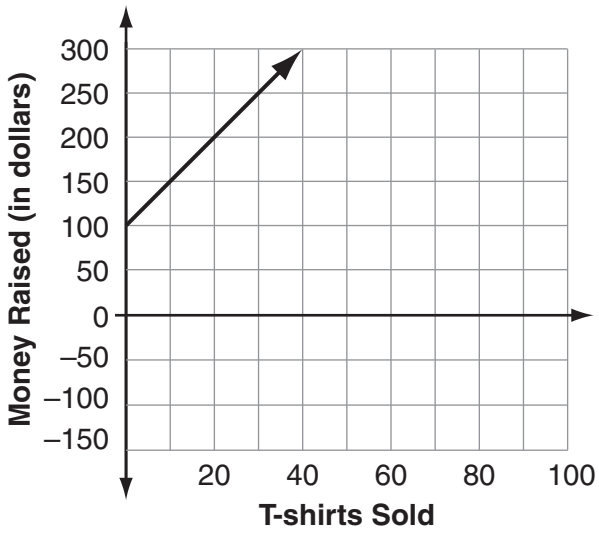
C.



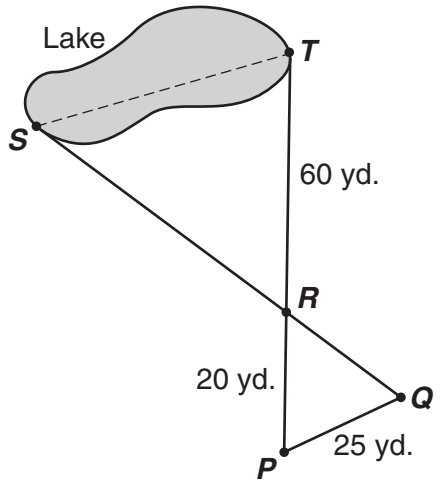
B.



D.



28. The figure below shows how a surveyor might calculate the distance across a lake.



Triangle *PQR* is similar to triangle *TSR*. What is the distance across the lake from point *S* to point *T*?

A. 65 yards
B. 75 yards
C. 80 yards
D. 85 yards

29. A pilot flies a plane 2400 miles to a destination and then returns to the city where he started.

- When the plane travels in the same direction that the wind blows, the trip takes 5 hours.
- When the plane travels in the opposite direction that the wind blows, the return trip takes 6 hours.

The equations below model this situation, where p represents the average speed of the plane and w represents the average speed of the wind.

$$2400 = 5(p + w)$$

$$2400 = 6(p - w)$$

What is the average speed of the wind in miles per hour?

A. 40 miles per hour
B. 44 miles per hour
C. 48 miles per hour
D. 80 miles per hour

30. Shane uses a pedometer to count the number of steps he walks each day. His goal is to walk 10,000 steps each day.

    a. By 10:30 A.M. on Monday, Shane walked 900 steps. What percent of his daily goal did Shane reach by 10:30 A.M. that Monday?

    b. Shane calculates that he walks $\frac{3}{8}$ mile for every 1,500 steps. How many miles does Shane have to walk to reach his goal of 10,000 steps? Show or explain how you found your answer.

    Shane recorded the number of miles he walked one weekend.

    - On Saturday, he walked $2\frac{2}{5}$ miles.
    - On Sunday, he walked $3\frac{1}{2}$ miles.

    c. How many steps did Shane walk on Saturday and Sunday combined? Show or explain how you found your answer.

Scoring Guide

Score	Description
4	5 points
3	4 points
2	2 or 3 points
1	1 point
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Scoring Notes

Part a: 1 point correct answer, **9 (%)**

Part b: 2 points correct answer, **$2\frac{1}{2}$ miles or equivalent**, with work or explanation
OR
1 point correct answer, without appropriate work shown or explanation given
or
correct strategy with an incorrect or missing answer

Part c: 2 points correct answer, **23,600 (steps)**, or correct based on parts a and b, with work or explanation
OR
1 point correct answer, without appropriate work shown or explanation given
or
correct strategy with a missing or incorrect answer
or
finding the correct total of steps for each day with work or explanation, and no incorrect work or explanation

Sample Responses:

a. $\frac{900}{10{,}000} = 0.09 \times 100 = 9\%$

b. $\frac{\frac{3}{8}}{1{,}500} = \frac{x}{10{,}000}$

$\frac{3}{8} \cdot 10{,}000 = 1{,}500x$

$3{,}700 = 1{,}500x$

$x = 2.5$ miles

OR

500 steps per $\frac{1}{8}$ mile

$\frac{10{,}000}{500} = \frac{20}{8} = 2\frac{1}{2}$ miles

c. $2\frac{2}{5} + 3\frac{1}{2} = 5.9$

$\frac{2.5}{10{,}000} = \frac{5.9}{x}$

$2.5x = 59{,}000$

$x = 23{,}600$ steps

OR

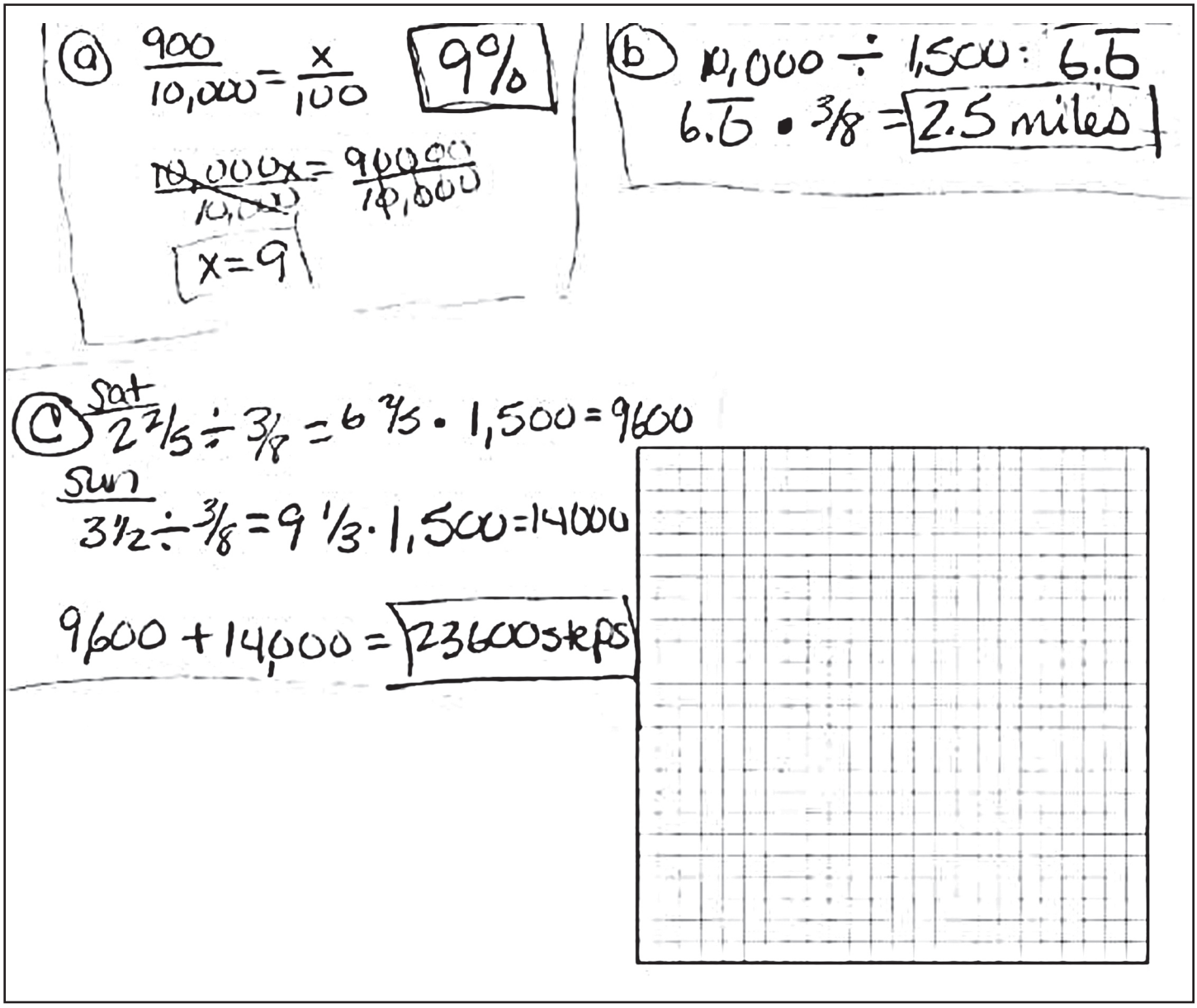
$2.4 + 3.5 = 5.9$

$\frac{5.9}{2.5} = 2.36$

$2.36 \times 10{,}000 = 23{,}600$ steps

Example of Score Point 4

Sample 1



Example of Score Point 4

Sample 2

work:

a) $\frac{900}{10,000} = \frac{9}{100} = 9\%$

b) $\frac{1,500}{10,000} = \frac{3}{8}$ mi. $\frac{3}{8} \times 10,000 = 3750 \div 1,500 = 2.5$ $2\frac{1}{2}$ miles

c) $1,500 \times \frac{3}{8}$ mi. $1,500 \times 2\frac{2}{5} = 3600 \div \frac{3}{8} = 9,600$ steps

$2\frac{2}{5}$ mi.

$1,500 \times \frac{3}{8}$ mi. $1,500 \times 3\frac{1}{2} = 5250 \div \frac{3}{8} = 14,000$ steps

$3\frac{1}{2}$ mi.

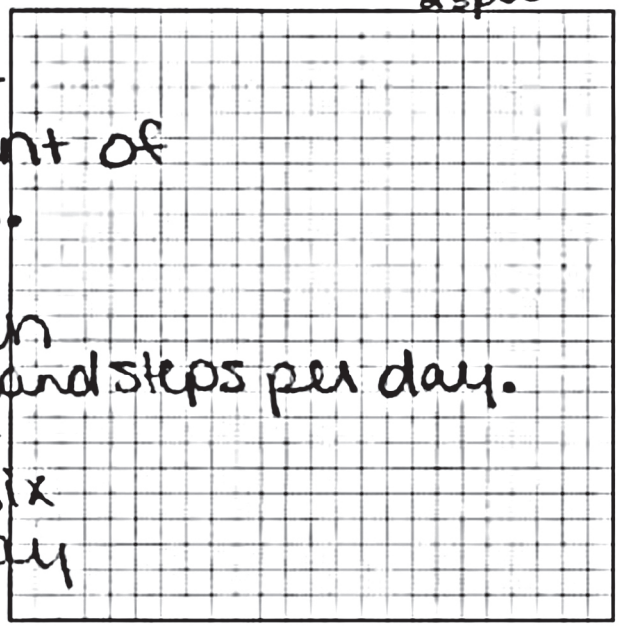
$9,600 + 14,000 = 23,600$

answers:

a) Shane reached nine percent of his daily goal by 10:30 A.M.

b) Shane has to walk two and one half miles to reach his daily goal of ten thousand steps per day.

c) Shane walked a total of twenty-three thousand, six hundred steps on Saturday and Sunday combined.



Example of Score Point 3

Sample 1

A.) $\frac{900}{10000}$ Shana reached 9% of his daily goal.

$9 \div 100 = .09$ or 9%

B) $\frac{3}{8} = 1500 \left\{ \frac{10,000}{1500} = 7 \right\} \frac{3}{8} \cdot \frac{7}{1} = \frac{21}{8} = 2\frac{5}{8}$

SHANE has to walk about $2\frac{5}{8}$ miles to reach his goal

C) $\frac{3}{8} = 1500$ steps

$\frac{3}{8}x = \frac{12}{5}(1500)$

$\frac{8}{3} \cdot \frac{3}{8}x = 3600 \cdot \frac{8}{3}$

$x = 9600$

$\frac{3}{8}x = \frac{7}{5}(1500)$

$\frac{8}{3} \cdot \frac{3}{8}x = 5250 \cdot \frac{8}{3}$

$x = 14000$

Shana walked 23,600 steps Sat. & Sun.

Example of Score Point 3

Sample 2

a) $\frac{900}{10000} = .09\%$

b) Calculate how many miles gone in one step, then multiply by 10,000 steps to determine miles in 10,000 steps.

$\frac{\frac{3}{8} \text{ miles}}{15000 \text{ steps}} = \frac{1}{\cancel{3}_{8}} \cdot \frac{1}{\cancel{15000}_{500}} = \frac{1 \text{ mile}}{4000 \text{ steps}}$ ∴ The opposite is of 1 mile per 4000 steps is also true.

1 step = $\frac{1}{4000}$ mile

Now, multiply $\frac{1}{4000}$ mile by 10,000 steps.

$\frac{1}{\cancel{4000}} \cdot \frac{\cancel{10000}}{1} = \frac{10}{4}$ mile = 2.5 mile per 10,000 steps

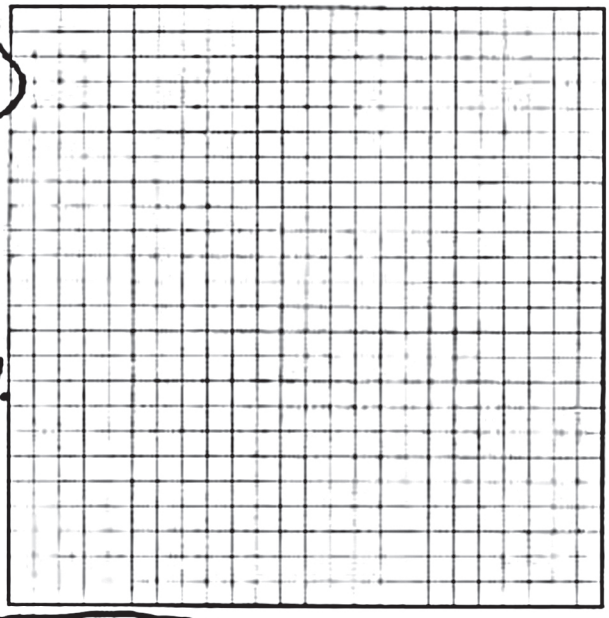
c) First, combine $\frac{12}{5}$ mi & $\frac{7}{2}$ mi by finding common denominator.

$\left(\frac{2}{2}\right)\frac{12}{5} + \frac{7}{2}\left(\frac{5}{5}\right) = \frac{24}{10} + \frac{35}{10} = \frac{59}{10}$ mi

Shane walked $\frac{59}{10}$ mi over weekend.

We already know from part b that 4000 steps are in 1 mile. Now we can simply cross-multiply to get total steps.

$\frac{\frac{59}{10} \text{ mi}}{x \text{ steps}} = \frac{1 \text{ mi}}{\frac{4000}{1}}$ $x = \frac{236000}{10}$ x steps = 23600



Example of Score Point 2

Sample 1

a) 10,000 ÷ 900 = 11.1

≈11%

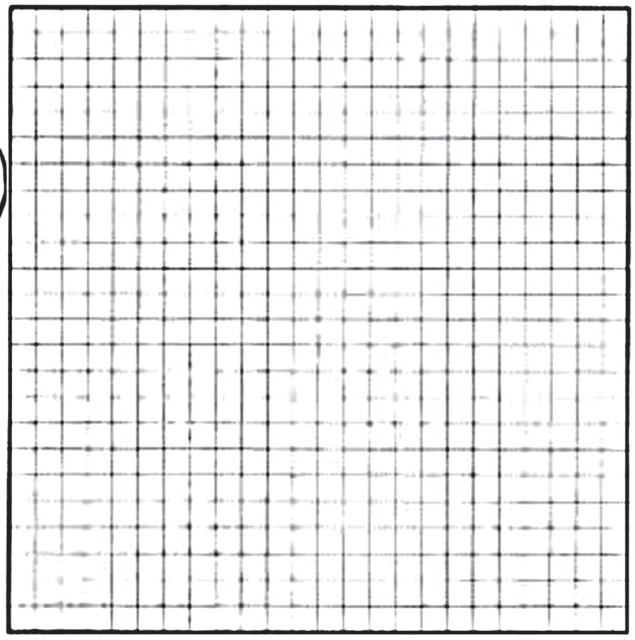
b) 10,000 ÷ 15000 = 6.$\overline{6}$

6.$\overline{6}$ • 3/8 = 2.5 miles

c.) 2 2/5 ÷ 3/8 = 6 2/5 • 1500 = Shane took 9,600 steps on Saturday

3 1/2 ÷ 3/8 = 9 1/3 • 1500

Shane took 14,000 steps on Sunday



Example of Score Point 2

Sample 2

A. Set up as a proportion.

~~10,000~~ / ~~900~~ $\frac{900}{10{,}000} = \frac{x}{100}$ $\frac{900 \times 100}{10000 \times x} \frac{90000}{10000} =$

.09 move 2 decimal place

09%

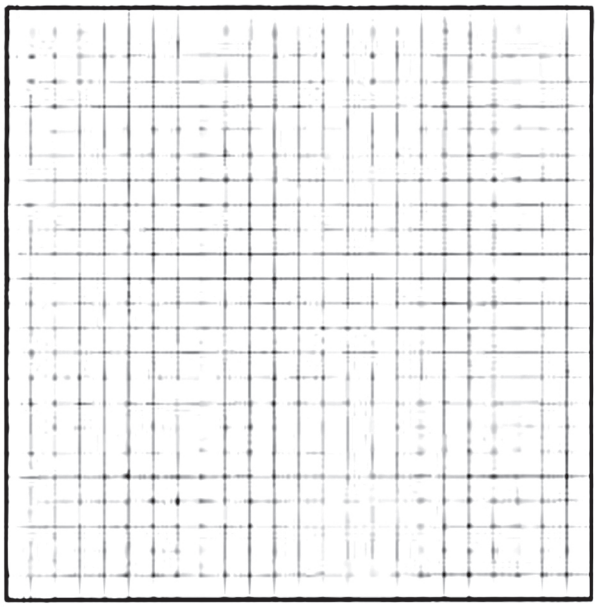
B.

2½ miles

because $2\frac{4}{3} \cdot \frac{3}{8} =$

$\frac{5}{2}$ reduce

2½ miles



C.1

32000

+ 6000

40,000

because divide 2 fractions times by 1000 add together

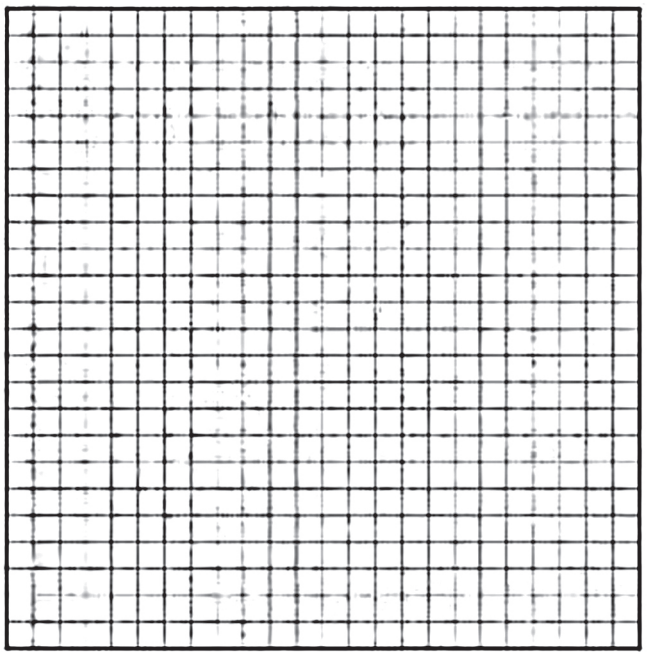
Example of Score Point 1

Sample 1

(A) $\frac{900}{10,000} \times \frac{?}{100} = \frac{90,000}{10,000} =$ 9% so far of daily total

(B) ?

(C) ?



Example of Score Point 1

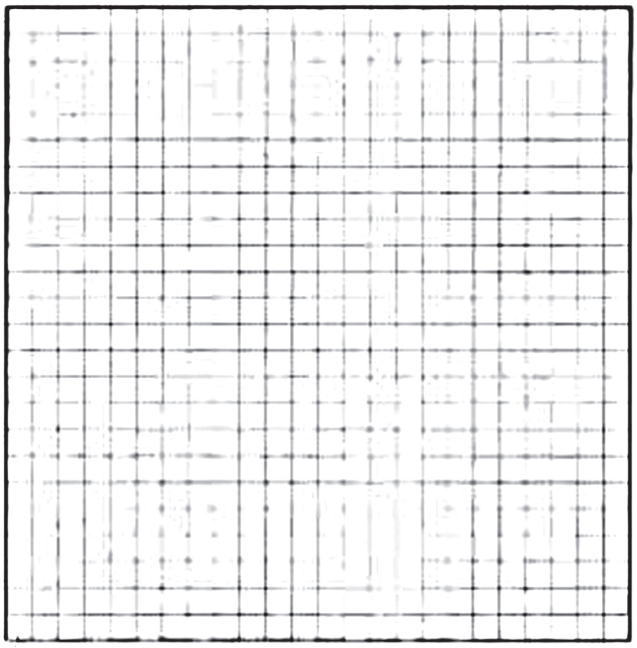
Sample 2

a. $900 \div 10000 = .09$

Shane walked 9% of his daily goal by 10:30

b.

C



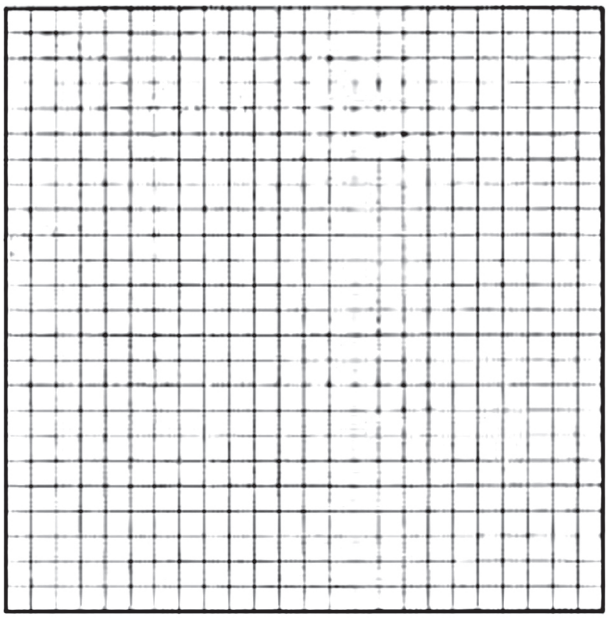
Example of Score Point 0

Sample 1

A. about 10%

B. $\frac{6}{8}$

C about 30,000



Example of Score Point 0

Sample 2

A) $10,000 = 900x$

11%

B) $\frac{3}{24} \cdot 8 = 1$ mile $= 4,500$ steps $= 2$ miles

$2\frac{1}{8}$ mile

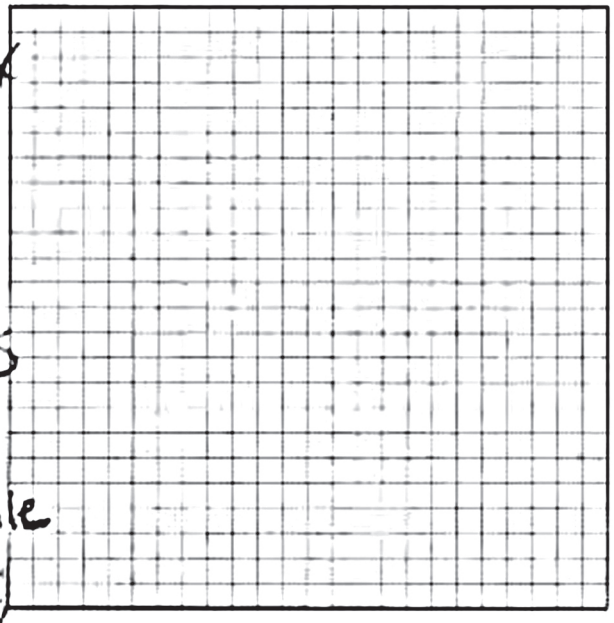
C) 59 miles $\div \frac{3}{8} \cdot 1500 =$

$\frac{59}{1} \cdot \frac{3}{8} \cdot 1500 = x$

$\frac{266,500}{80}$

3318.75 steps

I use that for every 3/8 mile Shane walks 1500 steps in my equation and figured it out



Science Directions

This Science test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

This test includes two types of questions: multiple-choice and constructed-response questions.

For the multiple-choice questions, you will be given four answer choices—A, B, C, and D. You are to choose the correct answer from the four choices. Each question has only one answer. After you have chosen the correct answer to a question, find the question number in your Answer Booklet and completely fill in the circle for the answer you chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The example below shows how to completely fill in the circle.

CORRECT MARK	INCORRECT MARKS
●	❍ ⊙ ◉ ⊘

If you decide to change your answer to a question, erase the wrong mark completely before filling in the circle of the new answer. Be sure you have only one answer marked for each question. **If two circles are bubbled in for the same question, that question will be scored as incorrect.**

If you are having difficulty answering a question, skip the question and come back to it later. Make sure you skip the circle for the question in your Answer Booklet.

For the other types of questions in the Test Booklet, you will be asked to write your answers in the box provided. Read the question carefully. If a question asks you to explain your answer or to show your work, be sure to do so.

You may make notes or use highlighters in your Test Booklet, but you must bubble or write your final answers in your Answer Booklet. **Do not make any stray or unnecessary marks in your Answer Booklet.**

Let's work through a sample question together to be sure you understand the directions.

Sample Question

1. What is the state animal of Montana?
   A. elephant
   B. grizzly bear
   C. zebra
   D. giraffe

Science

1. A scientist investigates the effects of freezing and thawing on rocks. Which statement is the **best** testable hypothesis for this investigation?

   A. The evidence clearly shows that large temperature changes cause rocks to weather.

   B. The temperature of the rocks will remain constant for the duration of the investigation.

   C. The repeated freezing and thawing of wet, porous rocks causes them to crack.

   D. The rocks will be cycled between 30°C and –10°C five times.

2. Students follow the experimental design below to investigate how **fast** a phase change occurs:

   - Place 0.5 L of water in a glass beaker.
   - Add 100 g of ice to the beaker.
   - Stir the ice water throughout the experiment.
   - Record the temperature of the water every two minutes until all the ice has melted.

   Which statement identifies a weakness of this experimental design?

   A. The mass of the water is not measured.

   B. The temperature of the ice is not monitored.

   C. The temperature of the room is not considered.

   D. The water level in the beaker increases during the experiment.

3. How does the DNA molecule code genetic information?

   A. by the number of phosphate groups
   B. by the type of carbohydrate the molecule contains
   C. by the sequence of nitrogen bases
   D. by the kind of proteins wrapped around the molecule

4. How does a catalyst change a chemical reaction?

   A. It decreases the collision frequency.
   B. It decreases the activation energy.
   C. It combines with the product.
   D. It stops the reaction.

5. Organic molecules contain carbon and are made by living organisms. Which molecule is an organic molecule?

   A. ammonia
   B. glucose
   C. salt
   D. water

6. Which force directly drives tectonic plate movement?

   A. global wind circulation
   B. mantle convection currents
   C. ocean currents
   D. solar radiation

7. Different types of waves in the electromagnetic spectrum are listed below from shortest wavelength to longest:

   - gamma (shortest)
   - X-ray
   - ultraviolet
   - visible
   - infrared
   - microwave
   - radio (longest)

   Which type of wave has the highest energy?

   A. gamma
   B. X-ray
   C. microwave
   D. radio

8. Which compound releases a phosphate group to provide energy for a cell's growth and repair?

   A. ATP
   B. glucose
   C. lipid
   D. starch

9. A ball is motionless on top of a table. Why is the ball motionless?

   A. No force is being exerted on the ball to make it move.
   B. The ball's force on the table is greater than the table's force on the ball.
   C. The frictional force on the ball keeps it from moving.
   D. The mass of the ball is too large for any force to move it.

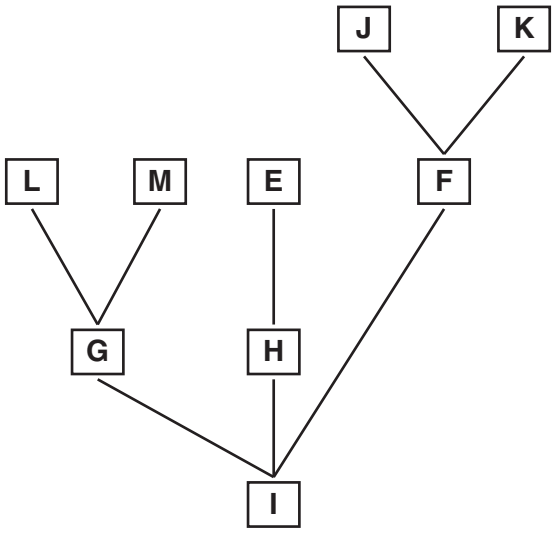
10. Neon-22 is an isotope of neon. What makes neon-22 an isotope?

    A. Neon-22 has fewer electrons than most neon atoms.
    B. Neon-22 has a different number of neutrons than other neon atoms.
    C. Neon-22 has an equal number of electrons and protons.
    D. Neon-22 has an electron configuration similar to that of argon.

11. Which property of diamonds makes them **most** useful to humans?

    A. color
    B. dark streak
    C. dull luster
    D. hardness

12. The phylogenetic tree below shows the relationships among nine different species.



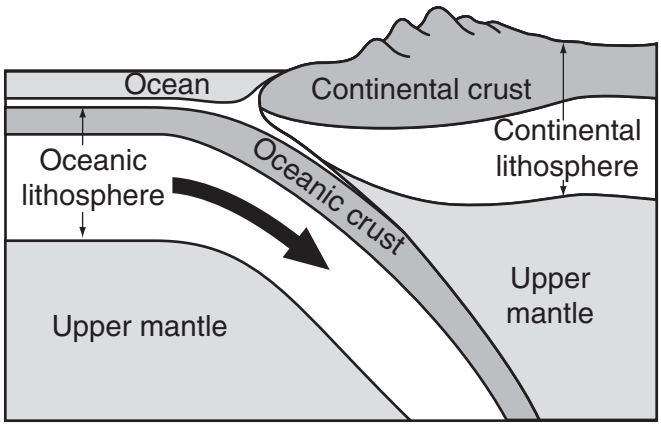
Which species is the most recent ancestor of species J, K, and L?

    A. species F
    B. species G
    C. species H
    D. species I

13. In 2000, the Canada lynx was listed as a threatened species in Montana and is now protected. The primary food source of the Canada lynx is the snowshoe hare. What is the **most likely** result of protecting the Canada lynx?

    A. Canada lynx populations have decreased.
    B. Snowshoe hare populations have decreased.
    C. Food sources for the snowshoe hare have decreased.
    D. Canada lynx populations have migrated out of Montana.

14. The diagram below represents a geological process.



    Which process does the large arrow in the diagram represent?

    A. mantle convection
    B. seafloor spreading
    C. subduction
    D. transform fault sliding

15. Which possible result of global warming is considered an advantage?

    A. increased sea level
    B. stopping of ocean circulation
    C. changes in the normal water cycle
    D. increased lengths of certain growing seasons

16. Which phase of matter contains the **least** amount of kinetic energy?

    A. gas
    B. liquid
    C. plasma
    D. solid

17. Students wanted to find out whether mice prefer to use a certain paw to get food from a food tube. The students ran three trials of the same experiment. In each experiment, they placed the food tube in a different position in the cage. The students' results are shown below.

Paw Preference in Mice

Position of Food Tube	Right Paw	Left Paw	None
Center	47	47	6
Far right	90	10	—
Far left	10	90	—

Which conclusion about paw preference in mice is supported by the data?

A. Paw preference is learned.
B. Paw preference is inherited.
C. Paw preference depends on the position of the food tube.
D. Paw preference is equally divided between right and left preferences.

18. Which statement **best** describes Earth's global climate if the Sun's energy output greatly decreased?

A. less terrestrial radiation and more wind
B. less terrestrial radiation and less wind
C. more terrestrial radiation and more wind
D. more terrestrial radiation and less wind

19. The table below shows contributions of different scientists to the current understanding of the expanding universe.

History of Expanding Universe

Year	Scientist	Contribution
1912	Slipher	observed that distant galaxies are moving rapidly
1915	Einstein	developed the theory of relativity but added constants to keep the universe static
1922	Friedmann	used Einstein's equations to show that the universe could be moving
1927	LeMaître	proposed the idea that the universe is expanding
1929	Hubble	gathered evidence to show that the universe is expanding
1931	LeMaître	proposed the idea that the universe began as a single tiny object

Which statement about the development of scientific understanding of the universe is supported by the table?

A. The Big Bang theory was proven between 1912 and 1931.
B. LeMaître's work was dependent on other scientists' work.
C. Einstein's work was not useful in developing the current understanding of the universe.
D. Hubble gathered evidence that showed Friedmann's work was incorrect.

20. A one-liter pot of boiling water is removed from a stove and placed in the middle of a room with a temperature of 25°C. Which phrase **best** describes the temperature of the water after two hours?

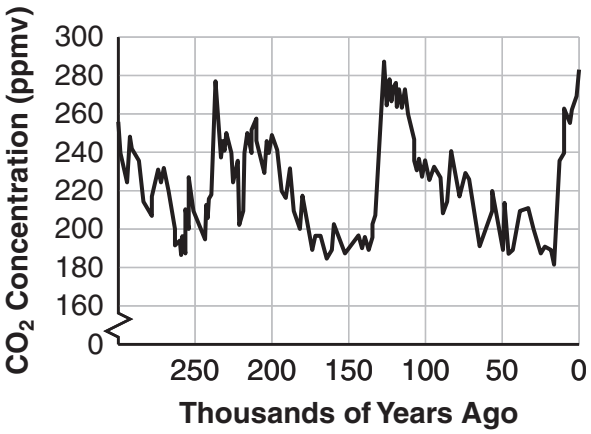
A. very close to the temperature of the room

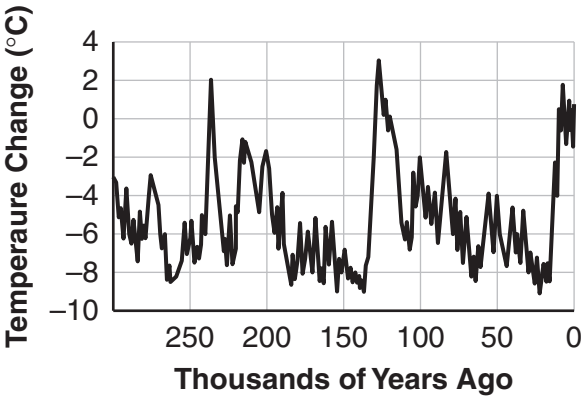
B. almost as hot as the pot's temperature on the stove

C. much warmer than the pot's temperature on the stove

D. halfway between the pot's temperature on the stove and the temperature of the room

21. The graphs below represent data collected from an ice core drilled from the polar ice cap at Vostok Station, Antarctica. The Vostok ice core provided information about changes in temperature and atmospheric concentration of carbon dioxide (CO_2) over the past 300,000 years.





Which conclusion is **best** supported by the Vostok ice core data?

A. The Industrial Revolution caused Earth's warming by increasing atmospheric carbon dioxide.

B. Earth's temperature and atmospheric carbon dioxide levels have gradually increased over time.

C. Earth maintains a constant temperature through negative feedback control mechanisms.

D. Changes in Earth's temperature are correlated with levels of atmospheric carbon dioxide.

22. A student wants to measure the mass of an object. Which tool would be **best** to use?

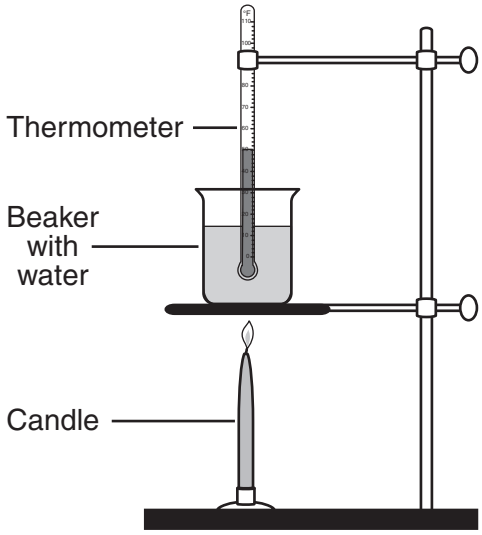
A. an electronic balance

B. a graduated cylinder

C. a metric ruler

D. a spring scale

23. A student uses the equipment shown below to determine how much heat is given off by burning a candle.



What is the **greatest** weakness in the design of this experiment?

A. The candle flame is not hot enough to heat water.

B. The candle flame is too far away from the thermometer.

C. The heat from the candle flame cannot be transferred to the water through air.

D. Much of the heat from the candle flame is transferred to the surroundings and not to the water.

24. In 2006, Stardust, a robotic spacecraft, collected material from the tail of a comet and returned the sample to Earth. Which statement **best** explains why scientists would want to collect and analyze material from the tails of comets?

A. to manufacture artificial gemstones

B. to locate fossil fuels on other planets

C. to learn about the formation of the solar system

D. to figure out which planets exploded in the past

25. A large ball is rolled along a frictionless table and collides with a stationary small ball. What happens to the velocity of the two balls when they collide?

A. The large ball's velocity increases, and the small ball's velocity decreases.

B. The large ball's velocity decreases, and the small ball's velocity increases.

C. The large ball's velocity increases, and the small ball's velocity increases.

D. The large ball's velocity decreases, and the small ball's velocity decreases.

26. To investigate how craters form on the Moon, students dropped four balls, one at a time, straight down into a pan of smooth flour. Each ball was the same size and was dropped from the same height. The balls used were made of brown cork, white plastic, blue glass, and red clay. Which hypothesis is appropriate for this investigation?

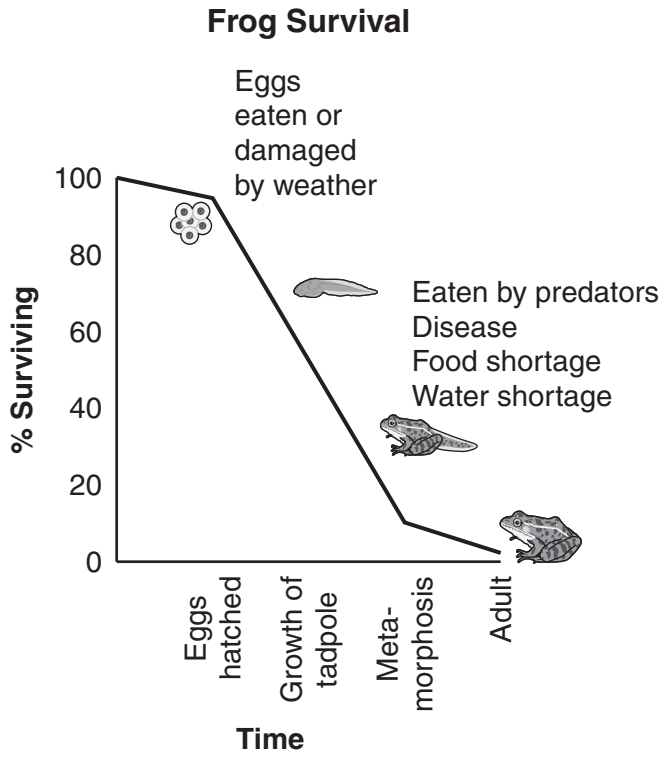
A. The surface of the Moon is similar to smooth flour.

B. Light-colored balls make wider craters than dark-colored balls make.

C. Heavier balls make deeper craters in smooth flour than lighter balls make.

D. Oval craters form when objects strike the Moon's surface at an angle.

27. The graph below shows the percent of frogs that survive from the egg stage to the adult stage.



a. Identify and describe **two** biotic factors that can affect the survival of frogs.

b. Choose **one** of the biotic factors from part (a) and explain how it could change a characteristic in the frog population over time through natural selection.

Scoring Guide

Score	Description
4	Response demonstrates a thorough understanding of how biotic factors affect populations through natural selection and how this contributes to the evolution of species over time. Response identifies two biotic factors and describes how each can affect the survival of frogs, and explains how one biotic factor can contribute to the evolution of the frog population over time. Response contains no errors or omissions.
3	Response demonstrates a general understanding of how biotic factors affect populations through natural selection and how this contributes to the evolution of species over time. Response identifies two biotic factors and describes how each can affect the survival of frogs, and explains how one biotic factor can contribute to the evolution of the frog population over time. Response contains one error or omission.
2	Response demonstrates a limited understanding of how biotic factors affect populations through natural selection and how this contributes to the evolution of species over time. Response identifies two biotic factors and describes how each can affect the survival of frogs, and explains how one biotic factor can contribute to the evolution of the frog population over time. Response contains two errors or omissions.
1	Response demonstrates a minimal understanding of how biotic factors affect populations through natural selection and how this contributes to the evolution of species over time. Response identifies two biotic factors and describes how each can affect the survival of frogs, and explains how one biotic factor can contribute to the evolution of the frog population over time. Response has one correct piece of information and contains several errors or omissions.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Scoring Notes

a. Biotic factors mentioned in the graph include:
- predators
- disease
- food shortage
- Any biotic (living) characteristic could be mentioned, including but not restricted to any competitors, predators, or prey.

Individuals who can tolerate the particular biotic factor chosen will survive.

b. Individuals who have a favorable characteristic for a particular biotic factor will be more likely to survive. Those who survive are the ones who will be more likely to reproduce. If an individual with a favorable characteristic both **survives and reproduces**, then the favorable characteristic will continue in the population over time. As long as a particular abiotic factor continues to favor certain individuals with a particular trait, it will be more likely for those individuals to pass on that trait to the next generation. Over time, the majority of the population will have that particular trait. Traits that are less favorable for that particular factor will gradually become less and less common in the population. The only exception to this is if this other trait has an advantage for some other reason.

Part (a) is worth 2 points and part (b) is worth 2 points.

Example of Score Point 4

A. Eaten by predators, when young are unable to defend themselves because they haven't matured fast enough.

Disease, they younger frog population is severly effected by disease because they haven't developed a strong immune system.

B. Disease could very easily change a population over time, because with the frogs with much weaker immune systems dying off only frogs that have built up immunities to those disease would survive, and pass on those stronger immune systems thus, through natural selection creating stronger immuned frogs.

Example of Score Point 3

a) The climate can play a very important role in the survival of the frog eggs. Also diseases can kill off a great number of the already hatched eggs. b) Diseases can help further along the natural selection in frog species. The frogs that overcome the disease then are allowed to thrive. Their trait that allowed them to surive is then passed on to their offspring, which are then capable of surviving the disease.

Example of Score Point 2

a) Disease, and food Shortage,

a) they ⊗. only the ones immune to the disease lived & they passed on there genes

Example of Score Point 1

A. Food Shortage, and weather damaged

B. Growth of a tadpole.

Example of Score Point 0

1. Water shortage + Weather
2. Frogs will have a bigger habitat if there is more water. They will have a smaller habitat and less food if there is less water.

Acknowledgments

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